

What is claimed is:

1. A magnetic recording medium comprising a magnetic layer comprising a ferromagnetic powder and a binder on a nonmagnetic support, wherein

the magnetic layer has a residual magnetization Φ_r ranging from 5 to 50 mA, and

ratio (S_{dc}/S_{ac}) of average area S_{dc} of magnetic clusters under DC magnetized condition to average area S_{ac} of magnetic clusters under AC erased condition ranges from 0.8 to 2.0.

2. The magnetic recording medium according to claim 1, wherein the ferromagnetic powder has an average particle size which denotes a maximum length in a powder having an anisotropic shape and ranges from 5 to 120 nm.

3. The magnetic recording medium according to claim 1, wherein the ferromagnetic powder in the magnetic layer has a volume packing density equal to or higher than 35 percent.

4. The magnetic recording medium according to claim 1, wherein the magnetic layer has a residual magnetization Φ_r ranging from 7 to 40 mA.

5. The magnetic recording medium according to claim 1, wherein the magnetic layer has a residual magnetization Φ_r ranging from 10 to 35 mA.

6. The magnetic recording medium according to claim 1, wherein the ferromagnetic powder has a σ_s ranging from 50 to 130 A · m²/kg.

7. The magnetic recording medium according to claim 1, wherein the

ratio (S_{dc}/S_{ac}) ranges from 0.8 to 1.7.

8. The magnetic recording medium according to claim 1, wherein the ratio (S_{dc}/S_{ac}) ranges from 0.8 to 1.5.

9. The magnetic recording medium according to claim 1, wherein the average area S_{dc} of magnetic clusters under DC magnetized condition and the average area S_{ac} of magnetic clusters under AC erased condition respectively ranges from 3,000 to 50,000 nm².

10. The magnetic recording medium according to claim 1, wherein the average area S_{dc} of magnetic clusters under DC magnetized condition and the average area S_{ac} of magnetic clusters under AC erased condition respectively ranges from 4,000 to 40,000 nm².

11. The magnetic recording medium according to claim 1, wherein the average area S_{dc} of magnetic clusters under DC magnetized condition and the average area S_{ac} of magnetic clusters under AC erased condition respectively ranges from 5,000 to 35,000 nm².

12. The magnetic recording medium according to claim 1, wherein the magnetic layer has a thickness ranging from 10 to 150 nm.

13. The magnetic recording medium according to claim 1, wherein the magnetic layer has a thickness ranging from 20 to 120 nm.

14. The magnetic recording medium according to claim 1, wherein the magnetic layer has a thickness ranging from 30 to 100 nm.